	Sex		Age		EF %		Etiology		NYHA	
	M	F	≤ 70	> 70	< 30	≥ 30	CHD	no CHD	I–II	III–IV
n. of pts	1722	621	1699	644	617	1073	975	1368	1590	753
ACE-i %	83	74	83	74	86	81	80	81	82	76
p	<0.001		<0.001		<0.01		NS		<0.001	

Conclusions: 80% of the pts with CHF, followed by a representative sample of Italian cardiological centers are treated with ACE-i at dosages which seem to be near to those shown to affect mortality in large trials. While etiology of CHF did not affect ACE-i prescription, male gender, younger age, lower values of ejection fraction were significantly associated with a higher rate of ACE-i utilization. Unexpectedly, ACE-i were significantly less prescribed in the patients with NYHA class III or IV than in those with a better functional capacity

1017-141 Current Community Practices in Heart Failure: Understanding the Under Utilization of Angiotensin-Converting Enzyme Inhibitors

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We reported a low rate of angiotensin-converting enzyme inhibitor (ACEI) use in congestive heart failure (CHF) in the community setting during 1992. To determine whether improvement has occurred, we examined the records of 1,150 patients with CHF admitted to 10 community hospitals during 1995. Demographic and clinical variables were stratified by ACEI use to understand prescribing biases. Prior to admission, 42% were taking ACEI (1992 = 33%, $p < 0.001$), while among those with a preceding history of CHF, 53% were taking ACEI (1992 = 39%, $p < 0.0005$). Among 1,087 hospital survivors, 64% were prescribed ACEI at discharge, an improvement over the 1992 rate of 51% ($p < 0.00005$). Features distinguishing patients treated with ACEI from those not are noted in the Table (*OR* = odds ratio):

Clinical Variable	ACEI Rx	No ACEI Rx	p
Age, years ± SD	74.1 ± 11.6	75.6 ± 12.1	0.05
Male sex, OR	1.34 (95% CI, 1.04–1.74)	0.03	
Serum creatinine, mg/dl	1.4 ± 0.9	2.0 ± 2.0	0.00001
Cardiomegaly present, OR	1.57 (95% CI, 1.14–2.14)	0.005	
LV ejection fraction, %	34.1 ± 14.8	42.2 ± 14.6	0.00001

In addition, ACEI were prescribed more frequently among those also receiving digoxin, diuretics and nitrates, and less frequently among those receiving alternate vasodilators and calcium channel blockers. ACEI prescription was more prevalent among those cared for by cardiologists and less prevalent among those whose CHF etiology and LV ejection fraction were unknown or not documented. Though ACEI use appears to be increasing, persistent under utilization in CHF may be explained by biases against drug prescription among older patients, females, and those with renal impairment and LV diastolic dysfunction. The prevalence of ACEI use may also be directly related to the quality of patient care. Effective methods to improve clinical practices in CHF should be sought.

1017-142 Effect of Vesnarinone on Cardiac Function in Patients with Severe Congestive Heart Failure

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Vesnarinone (V) has yielded variable results on morbidity and mortality in patients with end stage heart failure. This variability may relate to differences in ventricular remodeling or function. In 15 patients with EF < 30%, echocardiograms (echoes) were performed prior (V1) and after (V2) 12 ± 4.4 months of V (30 or 60 mg daily). Serial echoes from 9 patients matched for etiology, initial EF, age, and conventional medical treatment served as controls (C1, C2). LV end-diastolic volume (EDV), end-systolic volume (ESV), mass, sphericity, wall motion, RV area change (RVAC), mitral regurgitation grade (MR) and diastolic filling were quantified and compared. *p < 0.05 vs C1

	V1	V2	C1	C2
EDV (ml)	253 ± 89	229 ± 62	228 ± 33	205 ± 33*
ESV (ml)	196 ± 73	171 ± 55	175 ± 26	159 ± 31
EF (%)	23 ± 7	26 ± 9	23 ± 3	23 ± 5
Mass (g)	334 ± 87	305 ± 76	306 ± 73	317 ± 42
MR (1–4)	2.8 ± 1.1	2.5 ± 1.4	2.3 ± 1.1	2.9 ± 0.8*

An increase of > 5% in EF (+ response) was observed in 40% of the patients after V and none in C.

	C	V – response	V + response
LVEF 1	23 ± 3	25 ± 5	19 ± 7
LVEF 2	23 ± 5	23 ± 6	32 ± 11**
Δ LVEF (%)	0 ± 5	−2 ± 4	13 ± 6***
RVAC 1	46 ± 14	39 ± 17	24 ± 14*
RVAC 2	33 ± 18	24 ± 10+	52 ± 6**
Δ RVAC (%)	−13 ± 18	−15 ± 14	28 ± 11***

+p < 0.02 vs 1, *p < 0.02 vs C, **p < 0.002 vs 1, ***p < 0.001 vs C

Low initial EF was the only pre-treatment predictor of + response to V. An initial EF < 25% identified responders with a sensitivity of 71% and a specificity of 88%. In severe congestive heart failure, vesnarinone induces variable responses but appears to improve biventricular performance in patients with the most impaired function.

1017-143 The Impact of Warfarin on Clinical Outcomes in Heart Failure

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To understand the impact of warfarin on outcomes following hospitalization for heart failure (HF), we followed 1,087 consecutive hospital survivors for 6 months after discharge to track death, hospital readmission and functional status. The decision to prescribe warfarin was at the clinician's discretion; 23.2% received it. The hospital readmission rate was 45.7%; the post-discharge death rate was 17.9%. The warfarin-treated group was notable for younger age, longer duration of HF, lower serum sodium and creatinine, higher hematocrit, lower LV ejection fraction, higher prevalence of atrial fibrillation, cardiomegaly, and ventricular arrhythmia, and more use of vasodilators, digitalis, diuretics, and potassium supplements. Outcomes were stratified by warfarin use and adjusted for differences between the groups. The crude event rates and adjusted odds ratios for death and/or rehospitalization associated with warfarin administration are shown:

Endpoint	Warfarin	No Warf	Odds Ratio	p
All-cause mortality	17.5%	18.1%	0.780	0.44
Any rehospitalization	48.8%	44.8%	1.274	0.36
CHF rehospitalization	32.5%	23.1%	1.670	0.07
Death or rehospitalization	53.2%	50.3%	1.142	0.62

The HF death rate was no different between groups ($p = 0.96$). Mean adjusted quality of life measures, including functional class one month after discharge ($p = 0.05$) and over the course of the follow-up period ($p = 0.02$), were worse in the warfarin-treated group. Only the time to the first rehospitalization was favorable for the warfarin group ($p = 0.09$). Though limited by small sample size and the use of case-control methodology, this study suggests that 6-month event rates and other clinical outcomes are not improved with warfarin treatment. Considering the risks and cost of long-term anticoagulation, and the current prevalence of warfarin use in HF, our findings deserve confirmation in larger, prospective, randomized trials.

1017-144 Cost Effectiveness of Metoprolol in Idiopathic Dilated Cardiomyopathy

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Most β-blockers improve myocardial function after long-term administration in patients with congestive heart failure and some have also demonstrated lower cardiovascular morbidity. The present study analyses cost effectiveness in the placebo-controlled Metoprolol in Idiopathic Dilated Cardiomyopathy (MDC trial). *Patients and Methods:* In 383 patients (placebo (P) 189, metoprolol (M) 194). M was given in an average dose of 108 mg in addition to ACE-inhibitors (78%), digoxin (78%), furosemide (78%) in NYHA class I (3%), NYHA class II (42%), NYHA class III (51%) and NYHA class IV (4%) with a fix follow-up of either 12 or 18 months. There were 83 readmissions for cardiovascular morbidity in P *vs* 51 in M *($p < 0.04$)* and the actual number of performed heart transplantations (Htx) was 14 in P *vs* 2 in M *($p < 0.01$).* Calculations of costs were based on actual costs for health care in Sweden in 1983. Costs for Htx included pretransplant evaluation and 12 months follow-up after Htx. M did not cause any serious adverse event resulting in prolonged hospitalization and the slow titration of M only caused moderate increase in the number of visits to the physician. *Results:* Treatment costs per patient US$ 1993 values. NA = non applicable; NS = nonsignificant.